

CLAIMS

1. A Hall sensor on a semiconductor substrate (1)

in which a Hall plate (2) is formed from a zone (33, 32) of one conduction type;

in which a zone (33, 32) adjoining the Hall plate (2), which zone (33, 32) is

5 separated from said Hall plate (2) by a space-charge zone (41), of the other conduction type is provided; and

in which the Hall plate comprises contacts (311, 312, 313, 314, 321, 322, 323, 324)

for supplying a control current (IS), while the zone (32, 33) of the other (~~Leistungstyp~~)

conduction type comprises contacts (311, 312, 313, 314, 321, 322, 323, 324) for supplying

10 a compensation current (IK).

2. The Hall sensor according to claim 1,

in which the Hall plate (2) is arranged between two zones (31, 33) of the other conduction type.

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3. The Hall sensor according to claim 1,

in which the Hall plate (2) is arranged on the surface of the substrate (1); and

in which the zone (32) of the other conduction type is embedded in a substrate (1)

of the conduction type of the Hall plate (2).

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## TRANSLATION

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4. A method for operating a Hall sensor according to any one of claims 1 to 3;  
wherein a compensation current ( $I_K$ ) flows parallel to the control current ( $I_S$ )  
whose magnitude is such that the thickness ( $D$ ) of the Hall plate (2) is essentially constant.